Speaker: Martin Savage (UW, Seattle)

Title : Hadronic Interactions from lattice QCD

Abstract : With the continued deployment of computational resources with ever increasing capability and capacity, the numerical technique of lattice Quantum Chromodynamics (QCD) is moving toward becoming a practical tool with which to calculate the masses and interactions of strongly interacting particles such as protons and neutrons. Calculation of nuclear processes directly from QCD by numerical evaluation of the path integral promises to become a predictive tool in nuclear physics, allowing for the quantification of uncertainties in observables, such as reaction rates, and provide a reliable method to calculate processes that are inaccessible to experiment. I will review the progress that is being made toward achieving this objective.